REMARKS

Claims 1-24 are pending in the application.

Claims 1-24 have been rejected.

I.   REJECTION UNDER 35 U.S.C. § 102

Claims 1-9, 16-20 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2007/0030885 A1 to Jechoux, et al (hereinafter "*Jec*"). The rejection is respectfully traversed.

Claims 10-15 and 21-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by European Patent Application No. EP 1 143 638 A1 to Jechoux, et al (hereinafter "*Jec*"). The rejection is respectfully traversed.

A cited prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. MPEP § 2131; *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). Anticipation is only shown where each and every limitation of the claimed invention is found in a single cited prior art reference. MPEP § 2131; *In re Donohue*, 766 F.2d 531, 534, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985).

With respect to the rejection of Claims 1-9 and 16-20 based on *Jechoux*, independent Claim 1 as currently presented, recites "[a] method for supporting downlink JD (joint detection) in a TDD CDMA communication network system, comprising: judging whether the CAI (code allocation information) in a downlink timeslot will change in the next TTI (transmission time interval); inserting the changed CAI as a specific control information into a specified field in the traffic burst in the downlink timeslot corresponding to current TTI if the CAI will change; sending the traffic burst containing the specific control information to each UE (user equipment) in the downlink timeslot via a downlink channel."

Applicants submit that *Jechoux* does not disclose each and every element found in independent Claim 1. In particular, it is submitted that *Jechoux* does not disclose "judging whether

the CAI (code allocation information) in a downlink timeslot will change in the next TTI (transmission time interval)" and "inserting the changed CAI as a specific control information into a specified field in the traffic burst in the downlink timeslot corresponding to current TTI if the CAI will change" as recited by Claim 1.

The Office Action contends that *Jechoux* teaches each and every feature as recited and arranged in Claim 1. The Office Action argues that *Jechoux* (Abstract, paragraph [0016]) teaches "judging whether the CAI (code allocation information) in a downlink timeslot will change in the next TTI (transmission time interval)." (Office Action, page 4). The Office Action states "Jec discloses that the base station has knowledge of allocated spreading codes, **therefore judging if the CAI (code allocation information) in a downlink timeslot will change in the next TTI**." (Office Action, pages 2 and 4) (Emphasis added by Applicants).

Jechoux discloses that base stations can have knowledge of spreading codes. However, *Jechoux* contains no disclosure for **judging** whether the code allocation information in a downlink timeslot **will change in the next transmission time interval**. *Jechoux* merely discloses, in the background, a problem regarding conventional joint detection algorithms. (*Jechoux*, paragraph [0015]). The cited portion of *Jechoux*, with supporting text, states:

> [0015] A problem occurs when an advanced detection algorithm such as Joint Detection is used for the retrieval of the user's signals at the receiver side. With such an algorithm implemented, data bits from all users transmitting in a timeslot are simultaneously decoded and decided at receiver-side. For optimal performance of the algorithm, the receiver needs to know several parameters, especially spreading codes and channel profiles of all users which are present in a particular timeslot.
>
> [0016] **Generally**, when such an algorithm is implemented at a base station-side, the base station **can have** a knowledge of the allocated spreading codes because the radio access network to which it belongs controls their usage. (*Jechoux*, paragraphs [0015]-[0016]) (Emphasis added by Applicants)

Jechoux does not teach, expressly or inherently, that the base station "judges whether the CAI (code allocation information) in a downlink timeslot will change in the next TTI." A claim limitation is inherent in the prior art if it is <u>necessarily present</u> in the prior art, <u>not merely probably or possibly present</u>. *Rosco v. Mirror Lite,* 304 F.3d 1373, 1380 (Fed. Cir. 2002) (Emphasis added by Applicants). Therefore, *Jechoux* fails to anticipate Claim 1 for this independent reason.

Further, Claim 1 recites "inserting the changed CAI as a specific control information into a specified field in the traffic burst in the downlink timeslot corresponding to current TTI <u>if the CAI will change.</u>" The Office Action argues that *Jechoux* (Abstract, paragraph [0019]) teaches this feature recited in independent Claim 1. The Office Action states "Jec discloses that in communicating to each mobile station all spreading codes which are currently used by all users' signals present in one particular timeslot <u>and signaling is done fast with only marginal delay,</u> i.e. [sic] the mobile stations adjusting to the signaling environment accordingly." (Office Action, page 4) (Emphasis Added by Applicants). However, *Jechoux* contains no teaching or suggestion that any information, such as a changed CAI (as specific control information), is inserted into a traffic burst in the downlink timeslot <u>if the CAI (or midambles/transmission parameters as relied upon by the Office Action) will change.</u>

Jechoux discloses, in the background art section, a possibility to overcome the problem of the conventional joint detection algorithms located at a base station is to communicate to each mobile station all spreading codes which are currently used by all user's signals present in one particular timeslot. The cited portions of *Jechoux*, with supporting text states:

> [0017] But, the situation is quite different, when the considered algorithm is implemented at the mobile station in the down-link. A mobile station doesn't generally know the other spreading codes which are allocated to the other user's signals simultaneously present in the same timeslot. This fact seriously impacts the implementation of the algorithm, such the Joint-Detection, at mobile station-side.
> [0018] One first possibility to overcome this problem is to perform a so-called "Blind spreading-code detection" where it is tested for, for instance by despreading and thresh-holding at mobile station-side, if some or all possible spreading codes are used in a particular timeslot.

[0019] A second possibility consists in communicating to each mobile station all spreading codes which are currently used by all user's signals present in one particular timeslot. <u>This solution is practicable **only if** this signalling can be done fast and with only marginal delay</u>. This last constraint especially makes an explicit signalling by multiplexing signalling bits together with the data bits contained in the data fields of a burst **not easy to implement**.
(*Jechoux*, paragraphs [0017]-[0019]) (Emphasis added by Applicants)

Jechoux discloses that it is difficult for the signaling to be done fast and with marginal delay. *Jechoux* contains no teaching or suggestion regarding inserting changed CAIs. *Jechoux* does not teach, expressly or inherently, "inserting the changed CAI as a specific control information into a specified field in the traffic burst in the downlink timeslot corresponding to current TTI <u>if the CAI will change</u>." *Jechoux* fails to anticipate Claim 1 for this independent reason.

Accordingly, the Applicants respectfully request the § 102(e) rejection of Claim 1, and its dependent claims, be withdrawn. Independent Claims 7, 16 and 19 are rejected under the same rationale as Claim 1. Therefore, these claims are allowable for the same or similar reasons with respect to Claim 1, discussed above. Therefore, the Applicants respectfully requests the § 102(e) rejections of Claims 1-9 and 16-20 based on *Jechoux* be withdrawn.

With respect to the rejection of Claims 10-15 and 21-24 based on *Jechoux A1*, independent Claim 10, as currently presented, recites "[a] method for supporting downlink single-user JD in a TDD CDMA communication network system, comprising steps of: judging whether the ACN (active code number) in a downlink timeslot will change in the next TTI; inserting the changed ACN as a specific control information into a specified field in the traffic burst in downlink timeslot corresponding to current TTI if the ACN will change; sending the traffic burst containing the specific control information to each UE in the downlink timeslot via downlink channel."

Applicants submit that *Jechoux A1* does not disclose each and every element found in independent Claim 10. In particular, it is submitted that *Jechoux A1* does not disclose "judging whether the ACN (active code number) in a downlink timeslot will change in the next TTI" and

"inserting the changed ACN as a specific control information into a specified field in the traffic burst in downlink timeslot corresponding to current TTI if the ACN will change" as recited by Claim 10.

As stated herein above with respect to *Jechoux*, *Jechoux A1* contains no disclosure for **judging** whether the code allocation information in a downlink timeslot **will change in the next transmission time interval**. *Jechoux A1* merely discloses a problem regarding conventional joint detection algorithms and that, in such algorithms, the base station "can" have knowledge of the parameters. *Jechoux A1* does not teach that the base station performs any judging operation or that the base station makes a determination (or judgement) as to what may occur in the next transmission time interval. *Jechoux A1* does not teach, expressly or inherently, that the base station "judges whether the CAI (code allocation information) in a downlink timeslot will change in the next TTI."

Additionally, *Jechoux A1* contains no disclosure for inserting the changed ACN as a specific control information into a specified field in the traffic burst in downlink timeslot corresponding to current TTI if the ACN will change. *Jechoux A1* teaches, and is limited to teaching, a method to inform a mobile station regarding spreading code allocations to other user's. *Jechoux A1* does not teach or suggest that changed ACN information is inserted into a burst transmission if the ACN will change. *Jechoux A1* does not teach, expressly or inherently, the aforementioned features of independent Claim 10.

Accordingly, the Applicant respectfully requests the § 102(b) rejection of Claim 10, and its dependent claims, be withdrawn. Independent Claims 13, 21 and 23 are rejected under the same rationale as Claim 10. Therefore, these claims are allowable for the same or similar reasons with respect to Claim 10, discussed above.

Further, currently presented Claim 13 recites, inter alia, "detecting whether the traffic burst contains the ACN in the next TTI in the downlink timeslot." *Jechoux A1* contains no teaching for detecting whether the traffic burst contains any information. *Jechoux A1* fails to anticipate Claim 13 for this independent reason.

Therefore, the Applicant respectfully requests the § 102(b) rejection of Claims 10-15 and 21-24 based on *Jechoux A1* be withdrawn.

II.   CONCLUSION

As a result of the foregoing, the Applicant asserts that the remaining Claims in the Application are in condition for allowance, and respectfully requests an early allowance of such Claims.


If any issues arise, or if the Examiner has any suggestions for expediting allowance of this Application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at *rmccutcheon@munckcarter.com*.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

MUNCK CARTER, LLP

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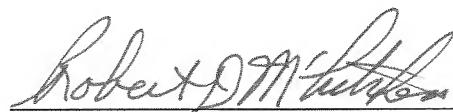
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